

CLAIMS

What we claim is:

- 1 1. A system for updating electronic files of remote devices, comprising:
2 a first device including a file differencing engine that generates differences
3 between an original version and a new version of an electronic file by:
4 identifying a first type of difference between the original and the new
5 versions;
6 generating a modified version of the original version using information of
7 the first type of difference;
8 generating encoded differences between the modified version and the new
9 version, wherein the encoded differences include a second type of difference
10 between the original and the new versions;
11 encoding the information of the first type of difference;
12 generating a difference file including the encoded differences and the
13 encoded information of the first type of difference; and
14 a file updating engine hosted on the remote device, the file updating engine
15 generating a copy of the new version using the difference file.
- 1 2. The system of claim 1, wherein generating a copy of the new version using the
2 difference file further comprises:
3 receiving the difference file;
4 reading the encoded information of the first type of difference;
5 generating a modified version of the original file using the encoded information of
6 the first type of difference; and
7 generating a copy of the new file using the modified version of the original file
8 and the encoded differences between the modified version and the new file.
- 1 3. The system of claim 1, wherein the first type of difference includes at least one of
2 differences resulting from address shifts due to source code line deletions, differences
3 resulting from address shifts due to source code line additions, differences resulting from

4 address shifts due to source code line modifications, differences resulting from address
5 shifts due to code block swapping, and differences resulting from compiling/linking the
6 new version.

1 4. The system of claim 1, wherein the second type of difference includes at least one
2 of differences resulting from source code line deletions, differences resulting from source
3 code line additions, differences resulting from source code line modifications, differences
4 resulting from data initialization changes, differences resulting from resource file
5 changes, differences resulting from configuration file changes, and differences resulting
6 from dictionary changes.

1 5. The system of claim 1, wherein the remote device includes at least one of cellular
2 telephones, portable communication devices, personal digital assistants, personal
3 computers, and portable processor-based devices.

1 6. An apparatus for generating difference files, comprising:
2 means for identifying a first type of difference between an original file and a new
3 file, wherein the new file includes an updated version of the original file;
4 means for generating a modified version of the original file using information of
5 the first type of difference;
6 means for generating encoded differences between the modified version and the
7 new file, wherein the encoded differences include a second type of difference between
8 the original and the new files;
9 means for encoding the information of the first type of difference; and
10 means for generating a difference file including the encoded differences and the
11 encoded information of the first type of difference.

1 7. The apparatus of claim 6, further comprising means for transferring the difference
2 file to a remote system that hosts a copy of the original file, the remote system updating
3 the hosted copy of the original file using the difference file.

1 8. A method for generating difference files, comprising:
2 receiving an original file and a new file, wherein the new file includes an updated
3 version of the original file;
4 identifying a first type of difference between the original file and the new file;
5 generating a modified version of the original file using information of the first
6 type of difference;
7 generating encoded differences between the modified version and the new file,
8 wherein the encoded differences include a second type of difference;
9 encoding the information of the first type of difference; and
10 generating the difference file including the encoded differences and the encoded
11 information of the first type of difference.

1 9. The method of claim 8, further comprising:
2 transferring the difference file to at least one remote system via at least one
3 coupling, wherein the remote system includes at least one processor-based system,
4 wherein the coupling includes at least one of a wireless coupling, a wired coupling, and a
5 hybrid wireless/wired coupling; and
6 updating a hosted copy of the original file in the remote processing systems using
7 the difference file.

1 10. A method for updating electronic files hosted on remote systems, comprising:
2 receiving an original file and a new file, wherein the new file includes an updated
3 version of the original file;
4 identifying a first type of difference between the original file and the new file;
5 generating a modified version of the original file using information of the first
6 type of difference;
7 generating encoded differences between the modified version and the new file,
8 wherein the encoded differences include a second type of difference;
9 encoding the information of the first type of difference;
10 generating a difference file including the encoded differences and the encoded
11 information of the first type of difference; and

12 updating a hosted copy of the original file in the remote systems using the
13 difference file.

1 11. The method of claim 10, wherein updating further comprises:
2 receiving the difference file;
3 reading the encoded information of the first type of difference;
4 generating a modified version of the original file using the encoded information of
5 the first type of difference; and
6 generating a copy of the new file using the modified version of the original file
7 and the encoded differences between the modified version and the new file.

1 12. A computer readable medium including executable instructions which, when
2 executed in a processing system, generate a difference file that includes coded differences
3 between an original file and a new file by:
4 receiving the original and the new file, wherein the new file includes an updated
5 version of the original file;
6 identifying a first type of difference between the original file and the new file;
7 generating a modified version of the original file using information of the first
8 type of difference;
9 generating encoded differences between the modified version and the new file;
10 encoding the information of the first type of difference; and
11 generating a difference file including the encoded differences and the encoded
12 information of the first type of difference.